Claim Amendments

1. *(Currently amended)* ~~A mammalian~~ An isolated mammalian cell comprising a recombinant polynucleotide containing a nucleic acid sequence that encodes a telomerase reverse transcriptase protein ~~, variant, or fragment~~ having telomerase catalytic activity when complexed with a telomerase RNA,

~~wherein the polynucleotide hybridizes under stringent conditions to a polynucleotide having a sequence complementary to SEQ ID NO:1~~

wherein the polynucleotide hybridizes to DNA having a sequence complementary to SEQ. ID NO:1 at 5°C to 25°C below T_m in aqueous solution at 1 M NaCl;

wherein T_m is the melting temperature of double-stranded DNA having the sequence of SEQ. ID NO:1 under the same reaction conditions; and

wherein the expression of the protein ~~, variant, or fragment~~ from the recombinant polynucleotide in the cell increases proliferative capacity of the cell.

2. *(Original)* The cell of claim 1, which is a human cell.

3. *(Original)* The cell of claim 2, which further comprises a selectable marker gene.

4. *(Original)* The cell of claim 2, wherein the recombinant polynucleotide comprises a constitutive promoter.

5. *(Original)* The cell of claim 2, wherein the recombinant polynucleotide comprises an inducible promoter.

6. *(Original)* The cell of claim 2, which is a liver cell.

7. *(Original)* The cell of claim 6, which is a hepatocyte.

8. *(Original)* The cell of claim 2, which is a nerve cell.

9. *(Original)* The cell of claim 8, which is a glial cell, astrocyte, or oligodendrocyte.

10. *(Original)* The cell of claim 8, which is a neuron of the central nervous system.

11. *(Original)* The cell of claim 10, which is a cholinergic or adrenergic cell.

12. *(Original)* The cell of claim 2, which is a retinal pigmented epithelial cell.

13. *(Original)* The cell of claim 2, which is a contractile cell.

14. *(Original)* The cell of claim 13, which is a heart muscle cell or smooth muscle cell.

15. *(Original)* The cell of claim 2, which is a fat cell.

16. *(Original)* The cell of claim 2, which is a fibroblast.

17. *(Original)* The cell of claim 2, which is a vascular endothelial cell.

18. *(Original)* The cell of claim 2, which is a hormone secreting cell.

19. *(Original)* The cell of claim 18, wherein the cell secretes insulin or glucagon.

20. *(Original)* The cell of claim 18, which is a pituitary cell, thyroid hormone secreting cell, or adrenal cell.

21. *(Original)* The cell of claim 2, which is a fat storing cell.

22. *(Original)* The cell of claim 2, which is an epithelial or mucosal cell.

23. *(Original)* The cell of claim 22, which is an oral cavity cell, stomach cell, or intestinal cell.

24. *(Original)* The cell of claim 22, which is a mammary gland, uterus, or prostate cell.

25. *(Original)* The cell of claim 22, which is an air space epithelial cell of the lung.

26. *(Original)* The cell of claim 2, which is a tubular cell of the kidney.

27. *(Original)* The cell of claim 2, which is a blood cell or a cell of the immune system.

28. *(Original)* The cell of claim 27, which is a T or B lymphocyte.

29. *(Original)* The cell of claim 27, which is a mast cell or eosinophil.

30. *(Original)* The cell of claim 27, which is a monocyte or macrophage.

31. *(Original)* The cell of claim 2, which is an osteoblast, osteocyte, or osteoclast.

32. *(Original)* The cell of claim 2, which is a chondrocyte or sinovial cell.

33. *(Original)* The cell of claim 2, which is a stem cell.

34 and 35. *CANCELLED*

36. *(Original)* The cell of claim 33, which is an adult stem cell.

37. *(Currently amended)* The cell of claim 2, wherein the polynucleotide encodes a full-length ~~, naturally occurring human~~ telomerase reverse transcriptase.

38. *(Original)* The cell of claim 2, wherein the polynucleotide encodes a human telomerase reverse transcriptase having the amino acid sequence of SEQ ID NO:2.

39. *(New)* The cell of claim 1, wherein the recombinant polynucleotide contains a nucleic acid sequence that encodes SEQ. ID NO:2, or fragment thereof having telomerase catalytic activity when complexed with a telomerase RNA.

40. *(New)* The cell of claim 39, wherein the recombinant polynucleotide contains SEQ. ID NO:1, or fragment thereof that encodes a protein having telomerase catalytic activity when complexed with a telomerase RNA.

Upon allowance of the application, please renumber the claims as follows:

Claim	1	→	1	Claim	20	→	24
	2	→	2		21	→	25
	3	→	7		22	→	26
	4	→	8		23	→	27
	5	→	9		24	→	28
	6	→	10		25	→	29
	7	→	11		26	→	30
	8	→	12		27	→	31
	9	→	13		28	→	32
	10	→	14		29	→	33
	11	→	15		30	→	34
	12	→	16		31	→	35
	13	→	17		32	→	36
	14	→	18		33	→	37
	15	→	19		36	→	38
	16	→	20		37	→	5
	17	→	21		38	→	6
	18	→	22		39	→	3
	19	→	23		40	→	4